

AMENDMENTS TO THE CLAIMS

1.-28. (Canceled)

29. (New) A modified DnaK protein comprising SEQ ID NO: 1, except that:

(a) the ATPase domain of SEQ ID NO: 1 is deleted, and

(b) a part of the β-sheet domain of SEQ ID NO: 1 is deleted and/or at least one hydrophilic amino acid in the β-sheet domain of SEQ ID NO: 1 is substituted with a hydrophobic amino acid in order to expose a hydrophobic inside of a β-sheet domain of the DnaK protein,

wherein the modified DnaK protein has improved blocking efficiency as compared to a DnaK protein consisting of an amino acid sequence from position 384 to a C terminus of SEQ ID NO: 1.

30. (New) The modified DnaK protein of claim 29, wherein the ATPase domain is an amino acid sequence from an N terminus to position 383 of SEQ ID NO: 1.

31. (New) The modified DnaK protein of claim 30, wherein the part of the β-sheet domain is an amino acid sequence from position 384 to at least position 418 and to at most position 472 of SEQ ID NO: 1.

32. (New) The modified DnaK protein of claim 30, wherein the part of the β-sheet domain is an amino acid sequence from position 384 to position 418 of SEQ ID NO: 1.

33. (New) The modified DnaK protein of claim 29, wherein an amino acid sequence from position 608 to a C terminus of SEQ ID NO: 1 is deleted.

34. (New) The modified DnaK protein of claim 29, wherein the at least one hydrophilic amino acid in the β-sheet domain is selected from the group consisting of aspartic acid, glutamic acid, lysine, and arginine.

35. (New) The modified DnaK protein of claim 29, wherein the hydrophobic amino acid is selected from the group consisting of valine, leucine, isoleucine, methionine, phenylalanine, tryptophan, and proline.

36. (New) The modified DnaK protein of claim 29, wherein the at least one hydrophilic amino acid is aspartic acid, and the hydrophobic amino acid is valine.

37. (New) The modified DnaK protein of claim 29, wherein the at least one hydrophilic amino acid is aspartic acid at positions 479 and 481 of SEQ ID NO: 1, and the hydrophobic acid is valine.

38. (New) A composition comprising the modified DnaK protein of claim 29.

39. (New) The composition of claim 38, wherein the composition is a blocking reagent, stabilizing agent, excipient, protein folding accelerator, protein refolding accelerator, coating agent for cell attachment, or coating agent for medical use.

40. (New) A method for blocking, stabilizing, enlarging, promoting protein folding, promoting protein refolding, or coating comprising using the modified DnaK protein of claim 28.

41. (New) A method for producing a modified DnaK protein, the method comprising:

(a) deleting an ATPase domain of a DnaK protein comprising SEQ ID NO: 1, and

(b) exposing a hydrophobic inside of a β -sheet domain of the DnaK protein comprising SEQ ID NO: 1 by deleting a part of the β -sheet domain of SEQ ID NO: 1 and/or substituting at least one hydrophilic amino acid in the β -sheet domain of SEQ ID NO: 1 with a hydrophobic amino acid, so as to provide a modified DnaK protein,

wherein the modified DnaK protein has improved blocking efficiency as compared to a DnaK protein consisting of an amino acid sequence from position 384 to a C terminus of SEQ ID NO: 1.

42. (New) The method of claim 41, wherein the ATPase domain is an amino acid sequence from an N terminus to position 383 of SEQ ID NO: 1.

43. (New) The method of claim 42, wherein the part of the β -sheet domain is an amino acid sequence from position 384 to at least position 418 and to at most position 472 of SEQ ID NO: 1.

44. (New) The method of claim 43, wherein the part of the β -sheet domain is an amino acid sequence from position 384 to position 418 of SEQ ID NO: 1.

45. (New) The method of claim 41, further comprising:

(c) deleting an amino acid sequence from position 608 to a C terminus of SEQ ID NO: 1.

46. (New) The method of claim 41, wherein the at least one hydrophilic amino acid in the β -sheet domain is selected from the group consisting of aspartic acid, glutamic acid, lysine, and arginine.

47. (New) The method of claim 41, wherein the hydrophobic amino acid is selected from the group consisting of valine, leucine, isoleucine, methionine, phenylalanine, tryptophan, and proline.

48. (New) The method of claim 41, wherein the at least one hydrophilic amino acid is aspartic acid, and the hydrophobic amino acid is valine.

49. (New) The method of claim 41, wherein the at least one hydrophilic amino acid is aspartic acid at positions 479 and 481 of SEQ ID NO: 1, and the hydrophobic acid is valine.